DOCUMENT RESUME

ED 237 128 JC 830 502

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TITLE Procedures for Developing an Inservice Industry/Education Exchange Program: Planning and Implementation Guide.
INSTITUTION Cerritos Coll., Norwalk, Calif.
PUB DATE Sep 83
NOTE 58p.
PUB TYPE Guides - Non-Classroom Use (055) -- Reports - Descriptive (141)

EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS Community Colleges; Cooperative Programs; *Curriculum Development; Exchange Programs; *Faculty Development; *Inservice Teacher Education; *Professional Continuing Education; *School Business Relationship; Two Year Colleges

ABSTRACT

This report describes an in-service industry exchange project conducted by Cerritos College during which five faculty members returned to the work place to update their skills and gather information useful in curriculum development. First, the project's objectives are delineated, covering: (1) formation of the Project Advisory Committee and Business/Industry Committee; (2) faculty participation; (3) negotiation of the exchange program with industry; (4) participation incentives; (5) plan development; (6) procedures to develop and implement the program; (7) the role of industry; and (8) promotion of gender equity and disadvantaged and handicapped services. Next, the general procedures for implementing and completing the in-service program are detailed. The bulk of the report consists of project reports by the five participating faculty members. Each report contains a project overview and sets forth purposes, objectives, plans, conclusions, and recommendations related to the improvement of the college's programs in four fields: administration of justice; automotive collision repair; electronics; and nursing. Report appendices include a project timeline, a sample letter, meeting agenda and minutes, and the objectives for each of the program areas. (LAL)

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PLANNING AND IMPLEMENTATION GUIDE

Procedures For Developing An Inservice Industry/Education Exchange Program

VEA SUBPART 3–ID No. CC-3-2-557

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SEPTEMBER 1983

JC 830 502

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DISSEMINATION

Information on the Cerritos College Project was disseminated on April, 1983, at the state conference of the California Community College Administrators of Occupational Education. Additional copies may be obtained by contacting the advisor of Vocational Education at Cerritos College.

CERRITOS COLLEGE

SUMMARY OF PROJECT OBJECTIVES

INSERVICE: EDUCATION/INDUSTRY EXCHANGE PROJECT

OBJECTIVE A 1: PROJECT ADVISORY COMMITTEE

The Project Advisory Committee, consisting of the people listed below, met on October 15, 1982:

Mrs. Mildred Ikemoto, Associate Dean, Health Occupations
Ms. Susan Cotler, Assistant Dean, Technology
Dr. Lee Westerlin, Assistant Dean, Business Education
Mrs. Lela Powers, Instructor, Business Education
Mr. Tom Jackson, Instructor, Business Education
Mr. Keith Adams, Assistant Dean of Vocational Education

Of the people serving on the committee, Dr. Westerlin, Mrs. Powers, and Mr. Jackson had participated in previous inservice education/industry exchange projects. At the organizational meeting, the committee discussed the following topics: (1) the problems encountered in prior projects, (2) the securing of inservice sites, (3) the participants selected to participate in the inservice project, and (4) the development of objectives by the faculty members participating in the project.

The project committee also established a timeline and agreed that the sites for the project inservice would be developed utilizing the college's advisory committees and industry contacts.

OBJECTIVE A 2: BUSINESS/INDUSTRY COMMITTEE

Because of the freeze placed on all special projects during the first few months of fiscal 1982/1983, this project did not get under way until the latter part of September, 1982. Because of the delay, the Project Advisory Committee felt that if the activities stated in the proposal were carried out and if the faculty planned objectives and activities were reviewed by existing division advisory committees, it was not necessary to establish an advisory committee to review the project's operational plan. In the opinion of the

committee, adding another advisory/review committee would have further delayed the organization and operation of the inservice project. An organizational meeting that included business/industry work site representatives was held on November 19, 1982. Please refer to Appendix D for minutes of the meeting.

OBJECTIVE A 3: FACULTY PARTICIPATION

Because of the delay in the starting of the inservice project, the Business Division instructor selected for the project withdrew. In place of the business marketing program, the college advisory committee selected two faculty members from the Nursing Department. The nursing faculty project was in the area of Neonatal Intensive Care. All faculty members selected from Administration of Justice, Automotive Collision Repair, Electronics, and Nursing completed their planned objectives. Please see Appendices E-F for the objectives planned by the participating faculty members.

OBJECTIVE A 4: NEGOTIATING EXCHANGE PROGRAM

The administrators of each vocational division involved with the Project Advisory Committee and the participating instructors arranged the business/industry site visitations. The inservice sites scheduled for Administration of Justice, Automotive Collision Repair, and Nursing were scheduled and completed as planned. The Electronics inservice site that had been scheduled was cancelled because of a change in company administration. The single site for electronics was replaced by six industrial sites. The project director provided guidance and assistance with the inservice sites and with the development of objectives when requested by the participating faculty.

OBJECTIVE A 5: INCENTIVES FOR PARTICIPATION IN INSERVICE PROJECTS

Even though not all the faculty reports addressed the topic of incentives, discussion with the participating faculty indicated agreement on the following incentives for inservice participation:

1. Provide faculty with ample released time to explore, in depth, the subject under investigation.

2. Provide for short-term as well as long-term inservice projects.

3. Provide instructor with credit for professional growth.

OBJECTIVE A 6: PLAN

The project director and division associate dean assisted (as needed) each participating faculty member in the development of his/her inservice program. The objective developed by each project participant are presented in the Appendices E-H.

OBJECTIVE B 1: SACRAMENTO MEETINGS

Due to the late start of all special projects during 1982/1983, consortium meetings were not held in Sacramento. Information on the Cerritos College Project was disseminated in April, 1983, at the state conference of the California Community College Administrators of Occupational Education (CCCAVE).

OBJECTIVE B 2: PROCEDURES TO DEVELOP AND IMPLEMENT THE EXCHANGE PROGRAM

In preparation for the inservice project, the faculty members met with their associate dean and/or with the assistant dean of vocational education to develop a list of general objectives and potential inservice education sites. Inservice sites were selected because of instructor interest, administrative contact, and/or advisory committee referral. Contacts to finalize the visitation schedule were made by the participants and/or their division associate dean.

A final report from each participating faculty member follows this section of the report.

OBJECTIVE C: INDUSTRIES' ROLE IN AND CONTRIBUTION TO THE EDUCATION EXCHANGE PROGRAM

Upon completion of the project, the project director visited with each participant regarding the support from the industrial community. Each faculty member reported that he or she received excellent cooperation from the work site coordinator. All faculty stated that the industry was willing to provide

facilities, staff time, and to make in-kind contributions; however, there was reluctance from the industry to make monetary contributions. The faculty felt that because there was not direct benefit to the industry, monetary contributions for inservice would be difficult to obtain. Because of the late start of the project, the change of work site location for the electronics inservice, and because of the project extension to accommodate the requirements of the administration of justice project, the college staff did not have the opportunity to bring together all the participants and the work site coordinators for final exchange of ideas and concerns. The participating faculty and division administrators all reported that a good rapport had been established with the participating industries, and they felt the industries could be called upon to support an exchange program again.

OBJECTIVE D: PROMOTE GENDER EQUITY AND DISADVANTAGED AND HANDICAPPED SERVICES

Not all project reports discussed the opportunities for people interested in non-traditional careers or for handicapped and disadvantaged persons. The topic, however, was reviewed with each participating faculty. The Los Angeles District Attorney's Office Affirmative Action Policy provides an opportunity for all qualified persons to enter the investigation fields. Health career opportunities in Neonatal Intensive Care Units (NICU) are open to males, females, and people who come from disadvantaged backgrounds. Handicapped persons would have difficulty entering an NICU related occupation because of the high degree of manipulative skill that is needed. In the electronics field, there are opportunities for women and men who have knowledge and are skilled in electronics. The auto collision repair industry probably has the most opportunities for women, disadvantaged, and handicapped. Women, men, and handicapped persons can be employed as damage estimators, paint and part suppliers, color matching specialists, and accessory installers. Handicapped persons and displaced homemakers can also become proprietors or managers in any of the listed auto collision repair occupations.

The vocational education administrative staff of Cerritos College supports the efforts of all students to improve their status in life. To meet this objective, this report has been shared with the Women's Center, EOPS/Financial Aid Offices, the Disabled Student's Resource Center, and the Counseling Office.

GENERAL PROCEDURES

IMPLEMENTATION FOR AND COMPLETION OF INDUSTRY/EDUCATION INSERVICE PROGRAM

1. Establish a college project advisory committee. This committee should be made up of faculty and administrators who have experience with inservice projects and/or good contacts with industry. Prior to beginning an inservice project, the committee should review and discuss the following:

   a. The objectives to be accomplished by staff participants in an inservice project.

   b. The problems encountered by the college in completing prior inservice projects or the problems encountered by other colleges when participating in industry/education exchange projects.

   c. The development of a plan and objectives by the faculty member(s) participating in the inservice project.

   d. The selection of staff to participate in the inservice project.

   e. The development of a timeline for completing the agreed-upon tasks in the industry/education inservice project.

2. Utilize existing program advisory committees or establish a business/industry advisory committee to review and assist with the inservice project implementation.

3. Finalize business sites where planned objectives can be completed utilizing the expertise of administration and faculty working together and with known industry contacts.

4. Meet periodically with participating faculty and the project advisory chairperson to determine progress toward meeting the established objectives. A format for the project report should be finalized during these informal meetings.

5. Prepare a final report. A suggested outline for the items to be included in a final report is as follows:

a. Overview of the project
b. Purpose of the project
c. Plan for conducting the project
d. Method of conducting the project
e. List of inservice sites
f. Discussion of objectives
g. Conclusions and recommendations

6. Present the report to the program advisory committee to the business/industry committee providing assistance, and to the college administration.

PROJECT REPORT

OCCUPATIONAL EDUCATION

PROJECT # CC 3-2-557

(ADMINISTRATION OF JUSTICE)

Richard McGrath
Cerritos College

PROJECT OVERVIEW

During the summer of 1983, I participated in Occupational Education Project No. CC 3-2-557 funded by the California Community College Chancellor's Office and administered by the Cerritos College Office of Vocational Education.

I was selected as one of four Cerritos College faculty members to participate in this joint industry/education training project. The project was undertaken and completed during the period from June 20, 1983 to September 15, 1983.

JUSTIFICATION AND PURPOSE

My faculty teaching assignment is in the Administration of Justice Department, supervising three full-time and six part-time faculty and teaching five different courses in Criminal Law and Criminal Investigation. My previous work experience included ten years with the Los Angeles Sheriff's Department, including three years as a detective. I resigned from the Sheriff's Department in 1963 to enter the teaching profession; therefore, it has been over 20 years since I have had practical experience in my teaching field.

My main project objective was to gain experience in current investigative procedures and update my knowledge of investigative techniques. There have been substantial improvement in telecommunication, computerized information storeage and retrieval systems and other technical areas of investigation in the 20 years since I had left the Sheriff's Department; and although I can adquately teach investigation from a conceptual perspective, I needed current exposure to the practical implementation of today's technology.

METHOD

After preliminary meetings with Keith Adams, Project Director, I had a meeting on January 22, 1982 with Clayton Anderson, Chief of the Los Angeles District Attorney's Office Bureau of Investigation. Mr. Anderson approved of the involvement of his agency in the project.

I was assigned to the major frauds unit of their headquarter's office in the Criminal Courts Building in downtown Los Angeles and immediately given full responsibility for the investigation of a real estate fraud case which had just

been reported to the District Attorney. I was given full support of department personnel when I requested assistance, but other than normal supervisory attention, I was allowed to fully carry out the duties of an investigator with no restrictions placed on my activities because of my status as an intern/trainee. Because of the nature of investigative work, the project was implemented during my summer recess from normal classroom teaching duties so that approximately full time could be devoted to the assigned investigation.

The project time was nominally scheduled for eight hours a day, three days a week for six weeks from June 20, 1983 to July 29, 1983; however, some time was devoted to the case at nights and on weekends during this period. Approximately 40 additional hours were devoted between August 1 and September 15 to complete some of the final investigative steps.

Because of the confidential nature of a criminal investigation, I cannot provide identifying information or full details of the nature of the investigation; however, it involved the fraudulent recording of a real estate deed to a $160,000 residential property owned by an elderly couple in the downtown area of Los Angeles. The investigation required extensive searches in real estate and court records in Los Angeles and locating and interviewing about 15 involved parties, including the victimized couple, real estate agents, attorneys, relatives, other knowledgable parties, and the defendant himself, interviewed in the presence of his attorney.

CONCLUSION

The District Attorney's Office provided an outstanding cooperation in this project. They allowed me to explore every aspect of their operation, learning as much as I could absorb in the time allowed.

Because of my background, they had no hesitancy in accepting me into their Investigation Bureau. A brief record check and background investigation was conducted prior to my reporting date and I was issued credentials as a District Attorney's Investigator.

The District Attorney's Office is actively involved in a number of intern programs for both undergraduate and graduate students, including some social workers and law students, so policy decisions and working procedures are already in place for this type of program, although I was one of the few allowed to be directly involved in active investigations.

As a result of this project, several segments of the Criminal Investigation course have been updated, particularly those segments relating to sources of information, computerized information retrieval systems, questioned document examination and fingerprint processing. Two new, short instructional units are being added to the course, one on Investigative Charting and one on the California Law Enforcement Telecommunications Systems (CLETS). These are two areas that had been neglected in the past because of a lack of current information.

RECOMMENDATIONS

Vocational Education is designed to prepare students for entry into the working world. Most of the vocational areas taught at the Community College level are highly technical and rapidly changing.

In order to meet our institutional goals of preparing students for entry into these complex fields, instructors must be capable of teaching today's technology, rather than the technology that was current when he or she was employed in the profession, perhaps 15 or 20 years previously.

This opportunity to return to my professional field for a short period has been very rewarding. For me, it has confirmed that most of my professional knowledge has remained current, and that I am teaching at a relevant level. But it has allowed me to improve, update and expand some of my skills so that I may teach about current technology, not as an onlooker who has observed or read about the changes but as a participant who has hands-on, real-life experience with the new innovations. I am certain that this will make me a more credible instructor.

I strongly urge that this program be continued and expanded; and that at some future date, consideration be given to requiring all vocational educators to demonstrate current subject matter knowledge through testing, course work, or involvement in a work-site program such as this.

PROJECT REPORT

OCCUPATIONAL EDUCATION

PROJECT # CC-3-2-557

(AUTOMOTIVE COLLISION REPAIR)

Modesto Vigil
Cerritos College

OVERVIEW

During the spring semester, 1983, I visited several insurance companies, auto collision repair companies, paint facilities, and frame straightening and bumper straightening companies. My intentions were to gain information on the procedures used by insurance companies to determine the repairability of vehicles and the competency levels of auto collsion repair technicians.

PURPOSE

The purpose of my project was to learn as much as possible about the needs of the auto collision repair industry. This information is necessary in order to upgrade present college curriculum and to develop curriculum that will prepare people to work with the materials being utilized in today's automobile.

METHODS

An industry visitation schedule was developed by contacting various firms that had cooperated with Cerritos College in the past and firms recommended by the college's Auto Repair Advisory Committee. During the initial contact, I explained the inservice project and my objectives. With very little effort, I was able to arrange a schedule that put me in the field one day per week. The industry site contact people helped me determine the elements of instruction that the industry felt needed to be incorporated into an auto collision repair program.

With the insurance company people, items such as the knowledge level of claim adjusters and field adjusters were discussed. Also reviewed were the forms and procedures used by the insurance industry and the role the computer now plays in the estimating of auto damage repair. The discussion with repair industry people centered around the technical skill level of people entering the field, the new repair equipment being utilized, and automotive refinishing.

JUSTIFICATION

Even though Cerritos College is the primary trainer of auto repair technicians in this area, it is difficult for teaching staff to keep up-to-date

with the industry. Inservice and release time projects provide the opportunity to obtain new information through observation and discussion.

PLAN

On Friday for 16 weeks of the spring semester, 1983, I visited one of the firms listed on the following page. The basic questions asked when talking to people were as follows:

1. What are the procedures used to process a damaged auto claim?
2. What data is collected on the in-house record forms?
3. What knowledge is needed by a claim adjuster/field adjuster?
4. What basic skill level is needed by entry-level people to obtain an employment interview? Are written tests being given to applicants?
5. What skills/knowledge are needed to advance on the job?
6. What is the latest equipment that has been purchased to repair the new automobiles?
7. What problems have been encountered in welding the material being used in the new automobiles?
8. How is the repair of an automobile part containing urethane being handled in your shop?
9. What kind of paint system are you using? Are you color matching in-house?
10. Are you aware of the Cerritos College Auto Collision Repair Program? What have you heard and do you have any suggestions for improving the training program?

INDUSTRY VISITATION SITES

1. M & D AUTOBODY
2. ALVIN'S AUTOBODY & PAINT
3. TOYOTA OF CERRITOS

4. S & J CHEVROLET
5. AUTO-B-CRAFT
6. BILL'S BODY SHOP
7. SPECIALTY CARS LTD.
8. CAR-O-LINER
9. GEORGE'S FRAME AND ALIGNMENT
10. BLACKHAWK AUTO DIVISION APPLIED POWER INC.
11. FAITH PLATING COMPANY
12. COAST APPRAISAL SERVICE
13. AUTO CLUB OF SOUTHERN CALIFORNIA
14. GOVERNMENT EMPLOYEES INSURANCE COMPANY & AFFILIATES
15. AIM - AWARD INSURANCE MART
16. VERN'S PAINT & SUPPLY
17. K & K COLOR & SUPPLY

CONCLUSION

Based upon discussions with industry representatives, the core of classes that make up the Cerritos College Auto Collision Repair Certificate meets the basic needs of the industry. The repair industry believes the college should emphasize in its curriculum welding techniques for new HSS and HSLA metals, instruction in the use of frame straightening devices for the unibody cars, color matching and clear coat systems, and management techniques. The insurance representatives felt that nomenclature (parts) of the automobile and new terminologies should be stressed. Also, people in training as damage estimators should develop some computer literacy as portable computers are now being used for damage repair estimating.

The auto collision repair field has excellent opportunities for the handicapped and for women. In addition to the repair damaged vehicles, women and handicapped persons could become paint and part suppliers, color matching

specialists, accessory installers, and collision damage estimators. Handicapped persons and displaced homemakers can also become proprietors or managers in any of the foregoing occupations.

INDUSTRY SUPPORT FOR TEACHER INSERVICE

Based upon my interviews with the people in the field, the industry would be very supportive of inservice projects. Industry is willing to provide staff time and facilities and to share new developments and procedures with teachers from the auto collision repair training centers. However, the collision repair and refinishing industry historically has not supported instructor inservice education monetarily. It is this writer's feeling that a considerable sales effort would be required for the industry to be convinced that it would benefit substantially from instruction inservice education. The reluctance to contribute extends from the fact that many repair shops are run by small business owners and they are not accustomed to making contributions for the support of inservice programs. On the other hand, small business owners will spend money to have their staff attend seminars and workshops related to their work.

INCENTIVES FOR TEACHER PARTICIPATION INSERVICE PROGRAM

Listed below are some incentives that this writer feels would encourage instructors to participate in inservice programs:

1. Provide instructors with ample release time.
2. Have short-term projects rather than a project of a semester or year in length.
3. Share in inservice project among the members of a department so each instructor could concentrate on one or two areas of interest.
4. Provide the instructor with professional growth credit.

RECOMMENDATIONS FOR THE CERRITOS COLLEGE AUTOMOTIVE COLLISION REPAIR AND REFINISHING PROGRAM

1. The Auto Collision Repair and Refinishing Department should examine its curriculum with the idea of eliminating one class

(section) in order to offer advanced classes that will be more attractive to the industry.

2. Each member of the auto collision/refinishing staff must make a concentrated effort to develop new contacts with key industry people.

3. Each member of the auto collision/refinishing staff must make a concentrated effort to improve his area of expertise.

4. The Cerritos College Auto Collision Repair and Refinishing Program should provide leadership in the training field and will sponsor seminars in the following areas.

    a. Color Matching

    b. Auto Collision Damage Estimating

    c. Welding the New Automotive Metals

    d. Frame Straightening

    e. Management

PROJECT REPORT

OCCUPATIONAL EDUCATION

PROJECT # CC 3-2-557

(ELECTRONICS)

Roy Wilson
Cerritos College

OVERVIEW

During this past semester I have visited a number of electronics firms in the greater Los Angeles area. Because the electronics industry is a leader in the area of high technology, and because the training for technicians must be constantly updated, I have sought to gain first hand information of present day utilization of electronics technicians. Also, because college instructors must be aware of the needs of industry for these highly skilled people, I have interviewed technicians on the job, engineers who supervise them, and managers who hire them.

PURPOSE

The purpose of this project was to learn more about the needs of the electronics industry in terms of trained electronics technicians and to determine if the electronics curriculum at Cerritos College needed to be updated to meet those needs.

METHOD

One day each week I visited with firms having manufacturing and research facilities in electronics. I wanted to interview engineers and managers who direct and utilize electronic technicians. With the help of these people, I tried to evaluate the minimum job entry level requirements for a two year graduate. I also interviewed the technicians themselves to find out what they considered the most valuable courses in their educational curriculum and what they considered the least valuable. I tried to determine what subjects they felt must be emphasized or added to a modern day training program, and what subjects may no longer be needed.

JUSTIFICATION

Although the department's advisory committee normally is concerned with all of the areas covered by this project, there is not enough time for the committee to cover them in depth. The committee meets only twice a year for a few hours. Also, because of the limited amount of time spent with the advisory committee, there is not enough time for the teaching staff to truly

understand the needs of the fast moving electronics industry. First hand observation of technicians at work over an extended period of time, discussion with engineers and managers concerning the quality and need for skilled workers, and interviews with the men and women actually doing the work provided me with some of the knowledge needed to update and reinforce the college's electronics training program.

PLAN

On either Thursday or Friday of each week during the semester, I visited one of the electronics firms listed at the end of this report. I devised an informal questionnaire to use when talking to the people I found at these facilities. Following are the primary and most often asked questions:

1. What is the current educational level needed for electronic technicians in terms of mathematics?
2. What level of electronics design theory is needed by the average technician, as opposed to his ability to make and interpret measurements?
3. Are there one or more areas of electronics which have increased in importance during the last ten years?
4. Are there one or more areas of electronics which have decreased in importance during the same time?
5. How important is mechanical ability?
6. Should technicians be trained in any special types of new electronic test equipment?
7. What new courses should be added to the traditional electronics curriculum? Should they be electives or mandatory courses?
8. Should any old courses be deleted?
9. What primary asset is needed by an entry-level technician during the pre-employment interview?
10. What asset is needed by an experienced technician for advancement on the job?

CONCLUSIONS

One common factor seemed to unify the different companies I visited: All of the personnel to whom I spoke felt that digital electronics was now an absolute necessity for the modern day electronics technician. Only a few short years ago this area of electronics was taught as a separate subject, but today digital devices have invaded every aspect of electronic equipment, and where digital electronics in the past was one of those "nice things to know," it has now become a requirement. All phases of electronic equipment and systems now incorporate some type of digital electronics. The managers, engineers, and technicians were unanimous in their agreement that at least one course in digital electronics should be a requirement in today's curriculum. Cerritos College presently offers such a course as an elective, but the department has already started making plans to require it in the future. There was a great deal of emphasis placed on the technician's need to understand digital interface standards, such as the RS-232 standard, and analog/digital interface circuits. The electronics department does not presently teach that aspect of digital electronics.

The need for mathematics varied from one company to another, but, as a minimum, most people interviewed felt that a good algebra and trigonometry background was necessary. A significant few people felt that a basic understanding of elementary calculus was needed. Cerritos College requires one semester of technical mathematics which introduces calculus.

Most of the firms felt that technicians did not have to understand design theory to accomplish their tasks. They did feel that a primary function of a technician was to construct breadboards and prototype equipment, and to make measurements and tests for the engineer in charge. There was agreement on the need for the technician to understand fabrication techniques, tools, and basic test equipment. Most especially the technician must be able to use the oscilloscope and be able to interpret data taken from standard test equipment. There is an important piece of test equipment which most community colleges do not yet teach: the logic analyzer. This piece of test equipment is expensive and new in the industry. However, it can be vital when troubleshooting or developing new or highly complex equipment, and most technicians and engineers interviewed agreed that a technician should be introduced to it. The Cerritos Electronics Department has contacted both Hewlett-Packard and

Tektronix representative concerning logic analyzers, and both companies seem to be enthusiastic concerning training staff members in its use. Tektronix has donated an expensive main-frame which can be used with a plug-in logic analyzer. (Because of budget restrictions, we do not have the plug-in as yet).

Most of today's check-out systems and test stations are microprocessor controlled. The engineers and technicians felt that a digital electronics course should be a requirement and that microprocessor theory should be an elective. Most of them felt that some understanding of computer programming, and computer terminal operation, was a necessity. Technicians should be able to write simple loop programs for diagnostic purposes, a procedure which requires some knowledge of either machine language or a high level language. Cerritos College has a five unit course in microprocessor theory. However, the small computers and associated hardware used in the course are fast becoming outdated and in two years will be completely obsolete.

The Electronics Department offers a certificate in Computer Technology if the student completes EL 34, Digital Circuits and Computer Logic, and a computer programming class such as DP 56, BASIC, or CS 80, Fortran. If the student also takes EL 44, Introduction to Computers, the certificate is enhanced with the increased number of hours.

It is probably time to retire the teaching of vacuum tube theory in the required curriculum. Transistors and integrated circuits are most likely here to stay.

One area of training which is not touched upon at most community colleges, and Cerritos is included, is fabrication and assembly of electronic systems. Technicians need to be trained in the use of hand tools and power tools, soldering techniques, cable lacing and layout, and proper techniques for handling sensitive electronic components. The technician should have some understanding of heat problems and electrical interaction between components. All of the technicians interviewed said they gained this type of experience on the job. It was never taught.

Not surprisingly, the most valued asset a prospective new employee needs in the pre-employment interview is not a technical skill, but rather ATTITUDE and APPEARANCE. Managers stressed that a good work attitude, clean and neat appearance, and ability to get along well with fellow employees can often make

up for any current lack in ability. As the managers pointed out, skills can be acquired, but attitude can not be taught nor easily changed.

For advancement on the job, the technician needs both advanced skills and a good attitude. Managers feel that continued learning is a necessity, and many companies encourage their employees to participate in work-study programs which may lead to engineering degrees.

Technicians who have completed two years of training, but not interested in pursuing a bachelor's degree, would like to have short mini-courses available at community colleges which would focus on problem areas in electronics.

RECOMMENDATIONS

Below is a list of recommendations which, if implemented, could better bring the Cerritos Electronics Department closer to meeting the needs of industry in terms of training techniques.

1. Combine the first two semesters of DC and AC theory, which are presently 3 units each, into one semester of 4.5 units. The present second semester currently has five weeks devoted to vacuum tubes. The vacuum tube material should be eliminated.

2. Make EL 34, Digital Circuits and Computer Logic, a required class instead of an elective class. Eliminate the digital material presently being taught in EL 30.

3. Either expand EL 34 to a 4 unit course so that interface standards could be taught there, or revise the material taught in EL 44 to include this material. NOTE: Interface standards is also a concern of our advisory committee.

4. Include training and/or demonstration of the use of a logic analyzer in EL 44.

5. Strengthen the certificate in Computer Technology requirements to include both EL 34 and EL 44 and at least two courses in programming and one course in computer mathematics. Present it as a formal option listed in the school catalog.

6. Consider the feasibility of an electro-mechanical course designed to teach fabrication techniques, shop practice, use of tools, and related concepts.

Note that such a course could be preliminary to teaching the mechanics of robotics.

7. Consider implementing classes as four week and nine week mini-course in tightiy defined subject areas. One such area might be a nine week course in special purpose vacuum tubes such as Cathode Ray Tubes, Vidicons, Photo Multiplier Tubes, etc., which are still in use in modern electronic systems. Another such course might be a four week class on the theory and use of the logic analyzer or the spectrum analyzer.

COMPANIES VISITED

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Hughes Aircraft Company
Mr. John Wreede, Senior Staff Engineer

Conrac Corporation
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PROJECT REPORT

OCCUPATIONAL EDUCATION

PROJECT # CC-3-2-557

(NURSING)

Sharon Behrends
Joan Pratt
Cerritos College

PURPOSE/JUSTIFICATION

We participated in a preceptorship in a Neonatal Intensive Care Unit to enhance the knowledge base and increase specific skills of instructors in Obstetrics, Pediatrics, and Critical Care.

As instructors with Adult and Pediatric Intensive Care experience, we felt that the need to expand our knowledge base into this new and challenging area of nursing.

Neonatal Intensive Care Units are a recent technological advance in OB/Peds in which younger, smaller, and sicker infants are cared for. In the U.S., 5 to 7% of all births each year; i.e., more than 150,000 babies, are premature. In the early 1980's, 80 to 85% of the infants born before term at weights of 1000 to 1500 grams (2¼ to 3¼ pounds) are surviving. Even more remarkable, 50 to 60% of the babies who weigh 750 to 1000 grams at birth (1½ to 2¼ pounds) survive.

Decreased birth rates and an increase in the number of high risk births make the "normal" obstetric/neonatal clinical experience less accessible. Therefore, we need to search for alternative clinical experiences for our students. Recent curriculum changes have placed OB/Peds as an advanced course; therefore, NICU is an appropriate choice for clinical experience. By providing this type of clinical experience for our students, we can better prepare them for employment in the community, with updated skills and knowledge.

Before students can be placed in specialized units, the instructors must exhibit expertise in those areas. The Preceptor Program will provide the time, the environment, and the experts to develop the instructors' expertise.

OBJECTIVES

1. Develop assessment skills and nursing tasks related to the infant in Neonatal Intensive Care Units.
2. Demonstrate skill in managing complex equipment used in NICU's.
3. Establish rapport with NICU staff.
4. Develop protocols for student utilization in NICU.

5. Develop instructor packet for use of instructors new to the NICU.

TO MEET OBJECTIVES

1. and 2. We completed the 80-hour NICU course offered for hospital personnel (see Appendix I).

After completion of the course, we worked in the unit. Mentors were assigned to us. Initially, we observed as the mentors assessed and cared for the infants. Gradually, we assumed more responsibility for the direct care of the infants while the mentors provided guidance and supervision.

Skills and tasks mastered included:

-Overall assessment of infant
-Normal parameters vital signs
-Normal parameters blood gasses
-Normal parameters lab values
-Normal parameters fluid and electrolyte replacement
-Care of infant on a respirator, including suctioning and chest physiotherapy
-Resuscitation of the newborn
-Interpretation of X-rays
-Protocols for feeding
-Calculation of dosages for medicine administration
-Gestational age assessment
-Total parenteral nutrition
-Retrograde IV medicine administration
-Assessment of infant for congenital anomalies
-Assessment of parental responses to premature birth and NICU setting
-Mandatory newborn screening for PKU, galactocemia, and hypothyroidism
-Admission policies and procedures
-Protocols for phototherapy
-Documentation
-Infection control

Equipment used:

-Cardiac monitors
-Isolette
-Vickers transporter
-Blood gas machine
-Bear cub infant ventilator
-IVAC flow controller
-Umbilical arterial monitor

-CO_2 monitor
-Bililights
-O_2 analyzer
-Chest tubes
-Endotracheal tubes

Set up for procedures:

-Cesarean section for high-risk babies
-Placement of lines
-Placement of chest tubes

Equipment is constantly changing and complex. It requires repeated usage to become proficient in manipulative skills. A nurse needs to be consistently in unit to maintain an adequate skill level.

3. NICU nurses work on 1:1 respirator dependent babies 1:2 without respirators and establishing bond with premature infant and with parents.

Initially, it was difficult for the mentor to allow us to care for "her" baby. We had to prove ourselves before we were allowed to take over direct care of any infant. Proving ourselves consisted of showing an interest in learning and a degree of manipulative skill. It was necessary to make it clear to the staff that we saw them as the experts and that we were there to learn, not to teach or to criticize their skill level or knowledge base.

We found all staff members willing to share their knowledge and skills and to allow us to be part of the NICU staff. As with most highly specialized units, staff develops a "community" feeling and one must earn her way in.

4. Students will be assigned to work with a mentor in NICU. Because of the distribution of students in the clinical area, it is not possible to assign an instructor to the NICU. It is an appropriate clinical rotation for the student in either the OB or Peds curriculum. Another potential utilization of the NICU would be for the LVN to RN career ladder student.

Regulations within which the hospital has to operate (JCAH and Title 22) require that students in special care units must be directly supervised for all procedures. To this end, either the instructor or a mentor will be with each student when she/he is giving care. The mentor, an NICU staff nurse, will work with the student on a "buddy" system. The student will be allowed to perform any procedure on which she has tested satisfactorily.

Selection of Students for NICU Clinical Rotation:

Because clinical facililties are limited, not all second year students will be able to have this experience. In addition, it is anticipated that not all students will express an interest in this field. The students, therefore, will self-select by completing the learning contract and making a formal request to the faculty. (Appendix II).

LVN to RN Career Ladder:

This group of students is experienced in nursing and many of them have chosen a specific area of nursing practice in which to work. During the last semester of the program, these students could be allowed to do their preceptorship in NICU, giving them an advantage in the tight employment market.

5. Instructor Packet. Prior to assigning students to the NICU, an instructor must avail herself of the opportunity to work in the unit with a mentor.

All materials from the 80-hour NICU course, including the text, are available in the Health Occupations Division. In addition, we will serve as human resources for any other instructors.

REPORT ON NON-TRADITIONAL JOB OPPORTUNITIES

NICU is a valid alternative for employment of the non-traditional nurse (male). A high percentage of nursing students fall into the disadvantaged category. Therefore, job opportunities in NICU are available to the disadvantaged.

The high degree of manipulative skills and the physical set up of equipment would make it very difficult for the wheel-chair bound to function in the unit. One R.N. in the unit has a hearing impairment and is able to function effectively.

APPENDIX I

KAISER FOUNDATION HOSPITAL
BELLFLOWER
EDUCATION AND TRAINING DEPARTMENT

NEONATAL INTENSIVE CARE COURSE

COURSE COORDINATOR: Rose Lipe, R.N., Pediatric/Nursery Instructor

I. Program Design:

A. A three week (120 hours) course is presented according to systems of the body.

The system format includes:

1. Didactic presentation in classroom setting.

2. Skills workshops with demonstration/return demonstration.

3. Clinical practice in nurseries under supervision of a preceptor.

B. Participants for this course will be chosen according to the following criteria and with supervision approval.

1. Class will be limited to 6-8 participants to facilitate supervision during clinical experience.

2. RN's working in nurseries are expected to attend.

3. LVN's working in newborn nursery will be accepted as space permits.

4. Additional KFH staff members interested in working in and willing to float to the NICU will be considered.

5. RN's from Harbor City and Canyon General will be accepted for transport training on a limited basis.

II. Course Objectives:

At the completion of this course, the participant will be able to:

A. Understand normal anatomy and physiological functions of the renal, respiratory, gastrointestinal, neurological, and cardiovascular systems.

B. Differentiate normal from abnormal clinical data while assessing the above systems.

C. Identify the necessity for nursing intervention when abnormal data is collected.

D. Demonstrate practical working knowledge of equipment utilized in the critical care areas.

III. Participants Expectations:

A. Successful completion of all examinations with a composite score of seventy five percent or above.

B. Demonstrate ability to function in the Neonatal Intensive Care Unit utilizing equipment and supplies in a therapeutic manner. This clinical evaluation will be based upon Standards of Performance for the NICU, the skills checklist and self evaluation tools.

IV. Continuing Education:

This course has been approved by the Board of Registered Nursing BRN provider #00104, for 45 units for classroom and 10 units for clinical experience. Total 55 CEU's.

KAISER FOUNDATION HOSPITAL
BELLFLOWER
NEONATAL INTENSIVE CARE COURSE

WEEK 1

* Includes Break

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
0800-1000 Introduction — Pre-test R. Lipe, R.N. 1000-1500 Break 1015-1215 Newborn Assessment — Physical Examination R. Alpert, M.D. 1300-1600 Renal A&P Film Oxygen Transport Film Acid Base Balance G. Fredericks, M.D. 1600-1630 Growth Charts R. Lipe, R.N.	0800-1030 Respiratory System Overview — Nursing Care of Infant with RDS. R. Lipe, R.N. 1030-1045 Break 1045-1230 Equipment Workshop-Oxygen Therapy. R. Lipe, R.N. 1230-1300 Lunch 1300-1630 Respiratory Problems of Newborn T. Caliendo, M.D.	0800-1000 Resuscitation of Newborn in Labor and Delivery. P. Fischer, M.D. 1000-1215 Break 1015-1215 Skills Workshop - CPPD/Suctioning R. Lipe, R.N. 1215-1300 Lunch 1300-1330 Questions and Answers R. Lipe, R.N. *Ventilation Overview/ Explanation Bourns Respirators Workshop. R. Helgamo, R.T.	0800-1100 Neurology Anatomy and Physiology Neurological Assessment A. Alter, M.D. 1100-1145 Lunch 1145-1345 Infant CPR Review and Practicum. R. Lipe, R.N. 1330-1345 Break 1345-1630 ABG's Certification and Workshop. R. Lipe, R.N.	0800-1000 Role of C/S Pick-up Nurse in L&D. K. Barents, R.N. 1000-1015 Break 1015-1215 Genetic Deficiencies D. Davis, M.D. 1215-1300 Lunch 1300-1430 -- Workshop Vickers Transport Vickers Ventilator R. Lipe, R.N. 1430-1445 Break 1445-1630 Hematologic Disorders W. Powell, M.D.

KAISER FOUNDATION HOSPITAL
BELLFLOWER
NEONATAL INTENSIVE CARE COURSE

WEEK II

* Includes Break

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
0800-0915 Cardivascular A&P Film Cardiac Assessment Film Study Period on Handout of Congenital Heart Disease 0930-1100 Neonatal Cardiology R. Stein, M.D. 1100-1200 Septic Infant R. Lipe, R.N. 1200-1245 Lunch 1245-1330 Non-Invasive Monitoring Workshop. R. Lipe, R.N. 1330-1530 Cardiac Monitors S. Salup Warmers/Isolettes R. Lipe, R.N.	*0800-1200 Parenteral Therapy Lecture/Workshop -Transfusions -TPN -Infusion Pumps -Invasive Blood Pressure Monitoring -Retrograde Medication Workshop R. Lipe, R.N. 1220-1300 Lunch 1300-1330 - Questions and Answers 1300-1530 X-Ray Interpretation J. Miller, M.D. 1530-1545 Break 1545-1630 -Nutrition Gavage Breast Milk Protocol Gastrostomy Care Metabolic Testing R. Lipe, R.N.	0800-0930 Environmental Concerns R. Lipe, R.N. 0945-1215 Metabolic Disorders P. Fischer, M.D. 1215-1300 Lunch 1300-1400 Admission Protocol Newborn Metabolic Screening R. Lipe, R.N. 1400-1415 Break 1415-1630 -Teratrogenesis -Drugs in Infants P. Fischer. M.D.	0800-1000 Surgical Emergencies R. Rosen, M.D. 1000-1015 Break 1015-1215 Orthopedic Congenital Defects. W. Tully, M.D. 1215-1300 Lunch 1300-1500 Calculation/Computation Pharmacology Workshop B. Vasquez 1500-1515 Break 1515-1615 Pharmacology Test 1615-1630 Review of Test	0800-1130 Birth Crisis: Impact on Parents and Staff Film: Discussion with Parents of Premature Infants. D. Winford, MSW 1130-1215 Lunch 1215-1315 Infections in the Newborn J. Rockenmacher, R.N. 1315-1430 Endocrinology P. Fischer, M.D. 1430-1445 Break 1445-1600 Discharge/Planning Multidisciplinary Care Plans

KAISER FOUNDATION HOSPITAL
BELLFLOWER
NEONATAL INTENSIVE CARE COURSE

WEEK III

* Includes Break

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
0800-0945 Final Examination 0945-1000 Break 1000-1200 Review of Test R. Lipe, R.N. 1200-1300 Lunch 1300-1430 Case Study Role Assignment 1430-1445 Break 1445-1530 Grand Rounds 1530-1630 Final Recap.	Clinical Experience with Mentor on Assigned Shift		CLINICAL EVALUATION and DEVELOPMENT ACTION PLAN	Grand Rounds

APPENDIX II

LEARNING CONTRACT

Learner: _____ Learning Experience: Prep. for NICU

Objectives	Resources and Strategies	Date	Evidence	Verification
1. Hold a baby in the prescribed safe manner	Text reference: Manual of Neonatal Care, edited by Cloherty and Stark		Demonstrated holding a doll with one hand supporting head and the other hand with fingers around ankles	Ask instructor to evaluate hand position and
2. Do a neonatal assessment	F/S/tape: Assessment of the newborn Growth Charts		Use doll to go thru assessment steps	Assessment skills
3. Calculate drug dosages and IV flow rates	Pharmolcology text Practice quizzes available in learning lab		Complete practice quizzes with 100% accuracy	Complete paper and calculation test with 100% accuracy
4. Know normal values for blood gasses, blood sugar, lytes, Hgb., urine specific gravity, v/s	Text reference above		Complete practice quizzes with 80% accuracy	Complete situational test with 80% accuracy
5. Operate the cardiac monitor and isolette	Learning lab practice		Set up and operate equipment in the learning lab	Instructor will evaluate set up of the equipment and verbally testoperational skills
6. Demonstrate infant CPR	American Heart Association guidelines and practice infant manikin		Demonstrate CPR on infant manikin	Ask instructor to observe CPR on infant and to question re: appropriate drugs and
7. Suction an endotracheal tube	Practice in Learning Lab		Demonstrate	dosages

APPENDICES

INSERVICE - EDUCATION/INDUSTRY EXCHANGE
Special Project #557

Timeline

1. November - In cooperation with the worksite coordinator, the faculty participant should plan the objectives for the project.

2. November - Faculty participants worksite coordinators attend an organization meeting at which time objectives are presented, discussed, and possibly modified.

3. January - Faculty participant reviews proposed inservice project with the college advisory committee for his/her subject area. Seek recommendations and suggestions for the development of an on-going strategy for industry/education inservice.

4. Feb. - May - Conduct inservice project. Observe and report on non-traditional job opportunities, handicapped, and disadvantaged job opportunities.

5. Feb. - May - Faculty participants assist worksite coordinators in developing procedures for the development and implementation of inservice/exchange programs.

6. Late May - Faculty participants and worksite coordinator attend a project wrap-up meeting at which time a written report is presented. Also, at this meeting, the suggestions and recommendations for future inservice programs are presented by the job site coordinators.

November 15, 1982

Dear

Thank you for your interest and willingness to serve as a work site coordinator for the "Education/Industry Exchange Project." In order for our faculty to maintain currency in their respective areas, it is important that they have exposure to the new developments in business and industry.

Enclosed is a meeting agenda, college map, and a parking permit. We look forward to your participation in this project organization meeting on November 19 at 1:30 p.m. in the Cerritos College Boardroom. If you have any questions regarding our meeting, please feel free to call me at 860-2451, extension 258.

Again, my thanks for your assistance and support of Cerritos College.

Sincerely

Keith K. Adams

Keith K. Adams
Assistant Dean of Vocational Education

KKA/cje

Enclosures

cc Richard Whiteman
Bedal Diaz
Mildred Ikemoto
Richard McGrath
Joan Pratt
Sharon Behrends
Roy Wilson
Modesto Vigil

AGENDA

Organization Meeting
Inservice-Education/Industry Exchange Project
November 19, 1982
VEA, Subpart III #557
1:30 p.m.

I. Welcome and Introductions

II. Project Description

III. Presentation of Project Objectives

A. Administration of Justice, Mr. Richard McGrath
B. Auto Body Mechanics, Mr. Modesto Vigil
C. Electronics, Mr. Roy Wilson
D. Health Occupations, Sharon Behrends and Joan Pratt

IV. Discussion of Objectives

A. Business/Industry review and comment
B. Finalize Objectives

V. Previous Projects

A. Description of Business Education Inservice, Mr. Marty Wensman, Associate Dean, Business
B. Successes and Difficulties Encountered, Ms. Lela Powers and Mr. Tom Jackson, Business Education Instructors

VI. Review of Project Timeline

VII. Other Items

INSERVICE-EDUCATION/INDUSTRY EXCHANGE PROJECT
VEA, Subpart III #557

Minutes of the Organization Meeting
November 19, 1982 1:30 p.m.

Present:	On-Site Coordinators:
Keith K. Adams	Bob Sylar
Sharon Behrends	Sandy McCone
Susan Cotler	
Tom Jackson	
Richard McGrath	
Joan Pratt	
Lela Powers	
Modesto Vigil	
Lee Westerlin	
Roy Wilson	

I. WELCOME AND INTRODUCTIONS

Keith Adams commenced the meeting at 1:35 p.m. He started by welcoming everyone and explained why Wendy Harp, the on-site coordinator for Modesto Vigil (Jury Duty), and Mike Money, the coordinator for Roy Wilson (Unknown), could not make the meeting.

II. PROJECT DESCRIPTION

The purpose of the project is to update the Cerritos College curriculum by having Cerritos instructors go to different job sites and upgrade their knowledge and skills. This information is used to improve instruction and update course outlines. The project is funded by the Chancellor's Office for approximately $12,400 and by the college for approximately $4,000. Each of the instructors involved receives three units of released time to accomplish this task. Once the instructors have utilized their released time, they will present reports to the people at today's meeting. The formal part of this project will end in May.

Mr. Adams introduced Lela Powers, Tom Jackson, and Lee Westerlin. These instructors had participated in previous inservice projects and were attending to relate their experiences.

III. PRESENTATION OF PROJECT OBJECTIVES

A. Administration of Justice, Mr. Richard McGrath

Mr. McGrath brought with him his site coordinator, Bob Sylar, who is the Training Supervisor for Los Angeles City District Attorney's Office.

Because it has been approximately 20 years since Mr. McGrath has been in the law enforcement/investigative field, his project will be to work with the District Attorney, who will assign him designated case loads dealing with a pre-trial investigating unit. What this consists of is getting additional information (witnesses, documents, records, physical evidence, etc.) for the district attorney to help him prepare his case for trial just before the trial is to occur.

The question was asked if one day a week for this project would be enough. The answer was no, he would be setting up a different schedule - a full 6 weeks at 30 hours a week.

Mr. Sylar, Mr. McGrath's coordinator, said that the Chief had selected tasks for him on a wide variety of cases, but ones that were short term.

B. Auto Body Mechanics, Mr. Modesto Vigil

Wendy Hart, Auto Club Arbitrator, will be Mr. Vigil's site coordinator. Through her, Mr. Vigil plans to be directed to areas of frame repair (lasers, steel differences, etc.), visit paint manufacturing companies and paint speciality shops (plastic, clear, hi solid, etc.), and investigate estimating by computers. Also on computers now are companies' inventories, cost analyses, and time studies - of which he wants to know more.

Mr. Vigil has read that within a very short period of time, 50% of the small repair shops around will not be in existence because of the economy and the costliness of the new machines to work on the new automobiles on the road.

Mr. Vigil also went on to say that the auto body person is more of a craftsman now than before. He or she needs more education and must renew a credential every year. He said, too, that there is a lot of growth potential -- that even though the small shops will be closing, the larger shops will be expanding - needing more personnel than ever before.

Ms. Hart could not attend the meeting because she was on jury duty.

C. Electronics, Mr. Roy Wilson

Mr. Mike Money, of Radio Shack, has been assigned as Mr. Wilson's coordinator on this project. Mr. Wilson will learn more about microprocessors in order to improve instruction in microprocessors as they relate to the electronics field. This might also touch upon the Robotics area and fiber optics. Basically Mr. Wilson said he would be teaching students the use of the microprocessor and troubleshooting the problems that are encountered.

There has been a management change at Radio Shack, and Mr. Wilson is not certain that Mr. Money will continue as a job site coordinator.

D. Health Occupations, Sharon Behrends and Joan Pratt

Ms. Sandy McCone, Supervisor of the Pediatric Services area at Kaiser, will be the coordinator for the project involving Ms. Behrends and Ms. Pratt. For their project they will be taking in preceptors to the hospital and learning equipment pertaining to intensive care, especially with babies. Once they learn this information, they will train students in their classes for positions in the intensive areas of various hospitals.

They will also be developing an instructional packet in order to implement this.

Ms. Behrends and Ms. Pratt will also have a different schedule for utilization of their released time. Their weekly hours may vary - a lot one week, and fewer the next. They said it will take more than one semester to accomplish their task, but were grateful for the one offered them.

Asked if any other colleges worked at Kaiser, Ms. McCone answered that Biola College, Compton College, and Long Beach City College also placed students at the hospital. However, the project on which Ms. Behrends and Ms. Pratt are working is the only one like it at the hospital.

IV. DISCUSSION OF OBJECTIVES

A. Business/Industry Review and Comment

(See comments noted above)

B. Finalize Objectives

(See attachments)

V. PREVIOUS PROJECTS

A. Description of Business Education Inservice, Mr. Marty Wensman, Associate Dean, Business

Ms. Lee Westerlin came to the meeting in place of Mr. Wensman. She gave a brief account of what her division has learned from inservice projects in the past before introducing the two people from the Business Division who had done a project in the semesters previous. She went on to say that one of the best things accomplished with these education/industry projects is the fact that the instructors can then go back to their classes with concrete, industry-learned expamples to go along with the principles they give their students. As she pointed out, theory is not always reality. She then introduced Ms. Lela Powers.

Ms. Powers said she worked on a project that took her to Southern California Edison, Bechtel Corporation, IBM, and Radio Shack.

Southern California Edison had about 7 word processing centers, and she visited with the head of each one. She spent a day in each center and observed, talked with the operators and the supervisors. Essentially she did this at each site she visited, gleaning any information from each for use in the classroom.

Ms. Powers said she learned when dealing with word processing equipment, researching all equipment available was the number 1 priority. Also, she learned, it is better to lease than to buy - although in a college situation that is not feasible - because equipment is constantly changing. She then read from her report.

When asked what she felt was most helpful to her that the individual sites did, she answered that just their taking the time to talk and explain things to her and treat her like an equal was very helpful. She said they all had an excellent rapport, and there seemed to be no sensitive areas which were "taboo." Also at the end of the day they were able to talk about what she learned and saw with the supervisors before leaving the sites.

Lee Westerlin then introduced Tom Jackson, of the MMB Department.

Mr. Jackson began his report by saying that his background has been in the retail food industry for 20 years, with experience in grocery stores and sales, and a one-year certificate in Food Market Management from USC, which was funded by the food industry and is scholarship supported. He went on to say that he teaches full-time here at Cerritos accounting classes, MMB classes, and food management classes.

Mr. Jackson's project was to learn about the food industry - those things which he does not already know, things new since his involvement in that industry. He spent time at Ralph's, Alpha Beta, and Von's Grocery Stores.

At Ralph's, he spent his time with scanning systems and internal auditing controls having to do with marketing data and sales forecasting.

Alpha Beta, he found, had the most complete, modern and up-to-date facilities of any stores he visited with. Their goal was to have a video tape set-up for training films in every store they own, rather than the few that existed at the time of his visit. They want each of their employees to have the exposure to the equipment and the knowledge it can bring.

Mr. Jackson concentrated on studying the managerial hierarchy of the Von's Store.

When asked what his suggestions and obstacles were in carrying out his project, he stated that the first thing he had to do was to promise not to go to the other stores he was visiting and pass on information about the others. His suggestion to others going to industry sites was to agressively seek experience that they had not had.

VI. REVIEW OF PROJECT TIMELINE

(See Attachment)

V. OTHER ITEMS

None

EDUCATION/INDUSTRY EXCHANGE PROJECT DESCRIPTION

Vocational Subject Area: Administration of Justice Project

Instructor: Richard McGrath

Participating Agency: Los Angeles County District Attorney's Office

PROJECT SUMMARY:

There have been substantial changes in criminal law and investigative technique in the 20 years since Mr. McGrath joined the Cerritos faculty. There are many criminal justice professional journals and legal publications which provide current conceptual information. However, knowledge of current field practices can only be obtained through actual observation and experience.

Mr. McGrath will work as a pre-trial criminal investigator in the Central Investigations Unit of the Los Angeles District Attorney's Office. This assignment will be for a six week period beginning approximately June 15, 1983. Some time will be devoted prior to that start date for familiarization with D.A. Office procedures and policies. The assignment will involve the investigation of criminal cases as they are prepared for trial presentation. Mr. McGrath will be trained and supervised by the Deputy District Attorney prosecuting each case and by his site coordinator.

OBJECTIVES:

1. Refresh and update previous skills in investigative technique.
2. Acquire knowledge and skill in operation of computerized data base information systems currently employed in criminal investigation.

OBJECTIVES: (continued)

3. Become familiar with modern communications media available in criminal investigation.

4. Become aware of current methods of organizing, evaluating and displaying information input in criminal investigations, particularly the use of flow charts, association charts, timelines and other control devices.

EDUCATION/INDUSTRY EXCHANGE PROJECT DESCRIPTION

Vocational Subject Area: Auto Collision Repair

Instructor: Modesto Vigil

Primary Participating Industry: Automobile Club of Southern California

PROJECT SUMMARY:

Various technological advances are taking place in the collision repair industry. Working through the claims arbitration department of the Automobile Club of Southern California, Mr. Vigil will be exposed to the newest techniques in collision repair and the procedures for estimating the cost of these procedures.

OBJECTIVES:

1. Review new refinishing procedures, ie. plastics, metal, clear coat, and high solid.
2. Become familiar with latest frame straightening equipment and measurement techniques.
3. Compare new techniques with standard estimating procedures.
4. Explore new developments in welding field that relate to auto collision repair: MIG Welders, Plastic Welder, Motorcycle Frame Straightener.

EDUCATION/INDUSTRY EXCHANGE PROJECT DESCRIPTION

Vocational Subject Area: Electronics

Instructor: Roy Wilson

Primary Participating Industries: McDonnell-Douglas, Hughes Aircraft, Conrac Corporation, Comtal 3M

PROJECT SUMMARY:

There is a need to identify the specific skills industry requires of its electronics technicians. As the electronics industry continues to undergo technological change, the task of meeting the current needs of industry becomes increasingly difficult. This project will involve weekly contact with four electronics laboratories. The instructor will work with engineers, managers and technicians to identify training skills that must be emphasized or added to an electronics training program.

OBJECTIVES:

1. To spend one day each week visiting the electronics laboratories of several local industrial firms with research/manufacturing facilities to gain first-hand information of present day utilization of electronics technicians.

2. To develop three separate questionnaires to be used for engineers, managers, and technicians at each employment site. Purpose of the questionnaire is to determine what each group perceives as the most critical need in technician training.

3. To produce a report detailing the strengths and weaknesses of the present electronics training curriculum at Cerritos College. Data gathered from observation, interviews and the questionnaires will be used as foundation material in this report.

EDUCATION/INDUSTRY EXCHANGE PROJECT DESCRIPTION

Vocational Subject Area: Nursing

Instructors: Sharon Behrends, Joan Pratt

Participating Industry: Kaiser-Permanente Hospital, Bellflower

PROJECT SUMMARY:

Neonatal Intensive Care Units are a recent technological advance in OB/Peds in which younger, smaller, and sicker infants are cared for. Decreased birth rates and an increase in the number of high risk births make the "normal" obstetric/neonatal clinical experience less accessible. Therefore, we need to search for alternative clinical experiences for our students. Recent curriculum changes have placed OB/Peds as an advanced course. Therefore, NICU is an appropriate choice for clinical experience. By providing this type of clinical experience for our students, we can better prepare them for employment in the community, with updated skills and knowledge.

Before students can be placed in specialized units, the instructors must exhibit expertise in those areas. This program will provide the time, the environment and the experts to develop the instructors' expertise.

OBJECTIVES:

1. Develop assessment skills and nursing tasks related to the infant in Neonatal Intensive Care Units.
2. Demonstrate skill in managing complex equipment used in NICU's.
3. Establish rapport with NICU staff.

OBJECTIVES: (continued)

4. Develop protocals for student utilization in NICU.

5. Develop instructor packet for use by instructors new to the NICU.

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